Remarks/Arguments

The present amendment is made is response to the non-final Office Action ofApril 10, 2006, identified as Paper No. 20060329. Claims 1-17 remain pending in the present application.

In the Action, the Examiner rejected claims 1-11 under 35 U.S.C. § 112, second paragraph as indefinite. The Examiner also rejected claims 1-5 under 35 U.S.C. § 102(b) as anticipated by U.S. Patents No. 6,091,670 to Oliver, et al ("*Oliver*") and U.S. Patents No. 5,200,930 to Rouquette ("*Rouquette*"). Claims 6-17 were rejected under 35 U.S.C. § 103(a) as obvious over *Oliver* and *Rouquette* in view of U.S. Patent No. 3,748,638 to Montgomery, Jr. ("*Montgomery*"). Copies of the cited references are enclosed.

I. Rejections under 35 U.S.C. § 112, Second Paragraph

Claim 1 has been amended to correct the errors noted by the Examiner.

II. Rejections under 35 U.S.C. § 102 in view of *Oliver*

Claim 1 has been amended to include limitations previously recited in several of the dependent claims, most of which were not addressed by the Examiner. Claim 1 thus does not contain any new matter. Claim 1 now recites, among other things, an elongated member housing an insulated conductor for providing power to the sensors via inductive coupling ***and*** a separate coaxial cable for transmitting electrical signals representing data to and from the sensors. The limitations recited in claim 1 are not disclosed in *Oliver*, and the claimed invention is therefore not anticipated under 35 U.S.C. § 102. *See* MPEP § 2131 ("A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference").

According to the Examiner, *Oliver* discloses (a) an elongated member, (b) a plurality of sensing elements along the member; (c) an electrical power source; and (d) means for inductively

coupling said power source to said sensing elements. *Oliver* does not, however, disclose the use of an ***insulated conductor to provide power*** via inductive coupling along with a ***separate coaxial cable for communicating data.*** For example, *Oliver* states that the towed cable contains "a wire bundle 22 for transmitting electrical power and/or data between the towing vessel and the electrical components within the cable 20." Col. 5, lines 42-44. As a result, electrical signals and power signals are disadvantageously combined onto a conventional twisted wire or wire bundle (unless battery power is used locally as an option in *Oliver*). By contrast, the present invention separates power transmission from data transmissions by providing power over an insulated conductor and communications over a coaxial cable. As the limitations directed to this structure in the claims are utterly absent from the cited reference, the rejections under 35 U.S.C. § 102 in view of *Oliver* must be withdrawn.

III. Rejections under 35 U.S.C. § 102 in view of *Rouquette*

According to the Examiner, *Rouquette* discloses (a) an elongated member, (b) a plurality of sensing elements along the member; (c) an electrical power source; and (d) means for inductively coupling said power source to said sensing elements. *Rouquette* does not disclose inductive coupling between a ***power source*** and a sensor, however, as the structure relied on by the Examiner is the inductive coupling between the return ***signal lines*** and the sensor. In fact, *Rouquette* explains in the portion of the specification cited by the Examiner that a capacitor is used to ***block*** power signals from reaching the sensor.

Rouquette also fails to disclose the claimed separation of power and communication signals into two lines, an insulated conductor and a coaxial cable, respectively. Instead, *Rouquette* uses a twisted wire pair for signal communications and transmitted power from a DC power supply (140). As a result, *Rouquette* fails to disclose express limitations of the claimed

invention and therefore cannot serve as the basis for an anticipation rejection under 35 U.S.C. § 102.

IV. Rejections under 35 U.S.C. § 103(a) in further view of *Montgomery*

According to the Examiner, one of ordinary skill in the art would be motivated to replace the twisted wire pair of *Oliver* or *Rouquette* with a coaxial cable according to *Montgomery* because coaxial cable is cheaper. The proposed motivation is insufficient to render the claimed invention obvious for several reasons.

First, it is doubtful that coaxial cable, a multi-layer product having two conductors and multiple layers of dielectric is actually cheaper than a conventional twisted wire pair. Regardless, *Montgomery* does not teach that coaxial cable ***alone*** is cheaper than twisted wire. *Montgomery* actually teaches that using a coaxial cable to connect multiple seismic stations in series (provided that each station also includes repeaters at each station, *i.e.*, circuitry for receiving the transmissions at each stations and then retransmitting the information to the next station) is cheaper than running a twisted wire pair individually to each station. Col. 1, lines 30-41. As *Montgomery* teaches that a ***single*** coaxial cable is cheaper than ***multiple*** twisted wire pairs, the reference does not motivate replacing a ***single*** twisted wire pair with a ***single*** coaxial cable.

Second, both of the primary references use a ***single*** pair of twisted lines to connect all of the sensors. The systems disclosed in these reference are thus not configured like the multiple, individually wired seismic stations that *Montgomery* sought to improve with the use of a single coaxial cable and repeaters at each stations. Thus, one of ordinary skill in the art would not be motivated by *Montgomery* because it has absolutely no applicability to *Oliver* or *Rouquette*. See MPEP § 2143.02 (motivation or suggestion must have some reasonable expectation of success).

Third, *Montgomery* ***requires*** the use of repeaters at each station for proper operation. Neither the cited references nor the claimed invention rely on repeaters, and the addition of such repeaters is unwarranted and burdensome. *See* MPEP 2143.01(IV) ("If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification").

Fourth, even if *Montgomery* did teach the replacement of a single twisted wire pair with a single coaxial cable as suggested by the Examiner, the claimed invention requires an insulated conductor for power transmission ***and*** a coaxial cable for data transmission. A modification of *Oliver* or *Rouquette* as proposed by the Examiner still would not include all of the limitations of the claimed invention as the modified system would not have an insulated conductor to provide power via inductive coupling ***and*** a separate coaxial cable for communicating data. MPEP § 2143.03 ("To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art").

A Two Month Petition for Extension of Time is submitted herewith and the Examiner is enabled to charge any fees associated with his transaction to Deposit Account 50-1546.

In view of the amendments made herein as supported by these foregoing remarks, the Examiner's reconsideration is respectfully requested. Should the Examiner believe an interview would expedite prosecution of this application, please contact the undersigned at 315-218-8515.

Respectfully submitted,

Dated: July 18, 2006

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